# University plans battlefield medicine center as drones transform war


University of Maryland, Baltimore is looking to offer soldiers new ways to survive without traditional medical facilities.
Carley Milligan/BBJ


By Matt Hooke – Reporter, Baltimore Business Journal
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## Story Highlights

- University of Maryland, Baltimore is establishing the Center for Combat Casualty Care with UMMC.
- The 5,000-square-foot center will develop battlefield injury treatments for drone warfare.
- A $1 million grant from Maryland Department of Commerce will partly fund the buildout.

Two of Baltimore's top medical institutions are working together on a new research center that will develop battlefield injury treatments for the new age of drone warfare.

The University of Maryland, Baltimore and the University of Maryland Medical Center's R Adams Cowley Shock Trauma Center have partnered to establish the Center for Combat Casualty Care, the university system announced last month. The center will be located at an existing university building in Baltimore City, but officials are still deciding on its final location, said Elizabeth Powell, development lead and a professor with the University of Maryland School of Medicine. The buildout will be funded partly by a $1 million grant from the Maryland Department of Commerce and will be completed within the next two years, Powell said.

The 5,000-square-foot center will focus on treatments for battlefield trauma, a crucial task as drone warfare changes how military medics approach their work. The wars in Ukraine and Iran, for example, are dominated by the use of small, cheap drones that are capable of destroying traditional evacuation vehicles like helicopters. That means field medics now need to keep patients alive for hours or even days.

Treatments discovered at the center could later be transformed into products for the civilian market, said Powell, an associate professor of emergency medicine. UMB civilian faculty will staff the center alongside military personnel who work at the university's training center for U.S. Air Force physicians. The exact number of staff working out of the site was not disclosed.

The connection with the U.S. military means that the Center for Combat Casualty Care will need higher security protocols than a traditional medical research center. The research center will have a Sensitive Compartmented Information Facility, or SCIF. SCIFs are high-security rooms like the White House's Situation Room. The center will also have prototyping labs and general office space.

Powell wants to use the new center to research solutions for soldiers who don't have access to large medical facilities or traditional care tools. One project the center could pursue is artificial blood substitutes to help soldiers survive for longer without traditional blood banks.

UMB faculty already have experience with similar military technologies: UMB professor Allan Doctor founded KaloCyte Inc., a company focused on artificial blood that has won over $19 million in federal funding. The success of KaloCyte shows how UMB could use the center to attract more federal research dollars even as the government slashes scientific spending on universities.

The center's discoveries could be applied far beyond a battlefield, too. The American Red Cross declared an Emergency Blood Shortage on Monday in response to the national blood supply dipping by 25% in June from increased injuries during the summer. Blood substitutes like those produced for the military could help fill the gap.

“Even in civilian trauma care, blood can be in limited supply,” Powell said.

Outside of direct treatments, academics want to find new ways to help combat medics make the right decisions to save patients' lives. Mobile applications can monitor a patient’s vital signs and transmit medical information to doctors at hospitals. UMB has already dipped its toes into this ancillary support, Powell said, by placing Air Force apps that monitor vital signs on Maryland State Police helicopters last year.

“Anything that we work on for military use cases will have some form of civilian application,” Powell said.